



SEQUENCE LISTING

<110> BARBOUR, ALAN G.
CARTER, CAROL

<120> A DIAGNOSTIC TEST FOR INFECTION WITH A SPIROCHETE BORNE
BY AMBLYOMMA AMERICANUM

<130> UTSK:352USC1

<140> 10/620,795

<141> 2003-07-14

<150> 08/437,013

<151> 1995-05-08

<150> 09/275,506

<151> 1999-03-24

<160> 38

<170> PatentIn Ver. 2.1

<210> 1

<211> 641

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Primer

<400> 1

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tctgctcaaa atgtaaaaac tgctgaagag cttggaatgc aacctgcaaa aattaatata 180
ccagcatcac taactggagc acaagcttca tggacattga gagttcaggt aggtgcaaat 240
caggatgaag caattgctgt taatattttc tcaactaatg ttgcaaatct ttttggtgga 300
gaagggtgtt aagcgggtcc agctcaagag ggtgcacaac aggagggagt tcaaccagct 360
ccagctcaag gtgggattag ctctccaatt aatgttacaa ctgctattga tgctaattga 420
tcgcttacaa agattgaaga tgctattaga atggtaactg atcaaagagc aaatcttggt 480
gctttccaaa atagacttga gtctgttaaa gctagcacag attatgctat tgaaaactta 540
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<211> 213

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 2

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Met His Met Leu Ser Asn Lys Ser Ser Ala Gln Asn Val Lys Thr Ala			
35	40	45	
Glu Glu Leu Gly Met Gln Pro Ala Lys Ile Asn Thr Pro Ala Ser Leu			
50	55	60	
Thr Gly Ala Gln Ala Ser Trp Thr Leu Arg Val Gln Val Gly Ala Asn			
65	70	75	80
Gln Asp Glu Ala Ile Ala Val Asn Ile Phe Ser Thr Asn Val Ala Asn			
85	90	95	
Leu Phe Gly Gly Glu Gly Val Gln Ala Ala Pro Ala Gln Glu Gly Ala			
100	105	110	
Gln Gln Glu Gly Val Gln Pro Ala Pro Ala Gln Gly Gly Ile Ser Ser			
115	120	125	
Pro Ile Asn Val Thr Thr Ala Ile Asp Ala Asn Ala Ser Leu Thr Lys			
130	135	140	
Ile Glu Asp Ala Ile Arg Met Val Thr Asp Gln Arg Ala Asn Leu Gly			
145	150	155	160
Ala Phe Gln Asn Arg Leu Glu Ser Val Lys Ala Ser Thr Asp Tyr Ala			
165	170	175	
Ile Glu Asn Leu Lys Ala Ser Tyr Ala Gln Ile Lys Asp Ala Ile Met			
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<210> 3

<211> 1336

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Primer

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ctaataccga ataaagtcaa ttgagttggt agttgatgaa aggaagcctt taaagcttcg 180
ctttagatg agtctgcgct ttattagcta gttggtaggg taagagccta ccaaggctat 240
gataagtaac cggcctgaga ggggtgatcg tcacactgga actgagatac ggtccagact 300

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<210> 4

<211> 330

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Primer

<400> 4

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tggttaatat ttctcaacta atgttgcaaa tctttttggg ggagaagggtg ttcaagcggc 180
tccagctcaa gaggggtgcac aacaggaggg agttcaacca gctccagctc aagggtgggt 240
tagctctcca attaatgtta caactgctat tgatgctaata gcacgcgtta caaagattga 300
agatgctatt agaattgtaa ctgatcaaag 330

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<210> 5

<211> 4

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 5

Gly Val Gln Ala

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<210> 6

<211> 9

<212> DNA

<213> Artificial Sequence

<220>		
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<210>	7	
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<210>	8	
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<210> 11
<211> 24
<212> DNA
<213> Artificial Sequence

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Primer

<400> 11
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<210> 12
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
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Primer

<400> 12
tgtagacgt taccgttact aacg 24

<210> 13
<211> 20
<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
Primer

<400> 13
ctggcagtcg gtcttaagca 20

<210> 14
<211> 25
<212> DNA
<213> Artificial Sequence

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Primer

<400> 14
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<210> 15
<211> 31

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Peptide

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1 5 10 15
Ile Phe Ser Thr Asn Val Ala Asn Leu Phe Gly Gly Glu Gly Val
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<210> 16
<211> 16
<212> PRT
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 16
Gln Ala Ala Pro Ala Gln Glu Gly Ala Gln Gln Glu Gly Val Gln Pro
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<210> 17
<211> 20
<212> PRT
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 17
Ala Pro Ala Gln Gly Gly Ile Ser Ser Pro Ile Asn Val Thr Thr Ala
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Ile Asp Ala Asn
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<210> 18
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 18
Ala Ala Pro Ala Pro Ala Ala

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<210> 19

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 19

Ala Thr Pro Ala Pro Val Ala

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5

<210> 20

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 20

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<210> 21

<211> 4

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic Peptide

<400> 21

Ala Gln Ala Ala

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<210> 22

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 22

Pro Thr Pro Ala Thr

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<210> 23
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 23
Pro Ala Pro Val Thr
1 5

<210> 24
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 24
Ala Gln Thr Ala
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<210> 25
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 25
Pro Ala Pro Ala Thr
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<210> 26
<211> 709
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

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gctcaatata accagatgca tatgttatct aacaaatcat ctgctcaaaa tgtaaaaact 180


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aatatatttct caactaatgt tgcaaatctt tttggtggag aagggtgttca agcggctcca 360
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tctgttaaag ctagcacaga ttatgctatt gaaaacttaa aagcgtctta tcgtcaaatt 600
aaagatgcaa taatgacaga tgaaattgta gcactctaca ccaacagtat tttgacacaa 660
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<210> 27

<211> 4

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 27

Ile Ser Glu Phe

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<210> 28

<211> 641

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Primer

<400> 28

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ccagcatcac taactggagc acaagcttca tggacattga gagttcagggt aggtgcaaat 240
caggatgaag caattgctgt taatattttc tcaactaatg ttgcaaatac ttttggtgga 300
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aaagcgtctt atgctcaaat taaagatgca ataatgacag atgaaattgt agcatctaca 600
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<210> 29

<211> 67

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
Peptide

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 1 5 10 15
 Ile Phe Ser Thr Asn Val Ala Asn Leu Phe Gly Gly Glu Gly Val Gln
 20 25 30
 Ala Ala Pro Ala Gln Glu Gly Ala Gln Gln Glu Gly Val Gln Pro Ala
 35 40 45
 Pro Ala Gln Gly Gly Ile Ser Ser Pro Ile Asn Val Thr Thr Ala Ile
 50 55 60
 Asp Ala Asn
 65

<210> 30
 <211> 67
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 Peptide

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 1 5 10 15
 Ile Phe Ser Thr Asn Val Ala Asn Leu Phe Gly Gly Glu Gly Val Gln
 20 25 30
 Ala Ala Pro Ala Gln Glu Gly Ala Gln Gln Glu Gly Val Gln Pro Ala
 35 40 45
 Pro Ala Gln Gly Gly Ile Ser Ser Pro Ile Asn Val Thr Thr Ala Ile
 50 55 60
 Asp Ala Asn
 65

<210> 31
 <211> 73
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 Peptide

<400> 31
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 1 5 10 15
 Ile Tyr Ala Ala Asn Val Ala Asn Leu Phe Ala Gly Glu Gly Ala Gln

20 25 30
 Val Ser Pro Ala Gln Glu Gly Ala Gln Gln Glu Gly Val Gln Ala Ala
 35 40 45
 Pro Ala Pro Ala Ala Ala Pro Ala Gln Gly Gly Val Asn Ser Pro Val
 50 55 60
 Asn Val Thr Thr Thr Ile Asp Ala Asn
 65 70

<210> 32
 <211> 73
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 Peptide

<400> 32
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 1 5 10 15
 Ile Tyr Ala Ser Asn Val Ala Asn Leu Phe Ala Gly Glu Gly Ala Gln
 20 25 30
 Val Ser Pro Ala Gln Glu Gly Ala Gln Gln Glu Gly Val Gln Ala Thr
 35 40 45
 Pro Ala Pro Val Ala Ala Pro Ala Pro Gly Gly Val Asn Ser Pro Ile
 50 55 60
 Asn Val Ile Thr Thr Val Asp Ala Asn
 65 70

<210> 33
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 <212> PRT
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 Peptide

<400> 33
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 Ile Tyr Ala Ala Asn Val Ala Asn Leu Phe Ala Gly Glu Gly Ala Gln
 20 25 30
 Ala Ala Pro Ala Gln Glu Gly Ala Gln Gln Glu Gly Val Gln Ala Thr
 35 40 45

Pro Ala Pro Val Ala Ala Pro Ala Pro Gly Gly Val Asn Ser Pro Ile
50 55 60

Asn Val Ile Thr Ala Val Asp Ala Asn
65 70

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<400> 34
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Ile Tyr Ala Ser Asn Val Ala Asn Leu Phe Ala Gly Glu Gly Ala Gln
20 25 30

Ala Ala Pro Val Gln Glu Ile Gly Gln Gln Glu Glu Gly Gln Ala Ala
35 40 45

Pro Ala Pro Ala Ala Ala Pro Ala Gln Gly Gly Val Asn Ser Pro Ile
50 55 60

Asn Val Thr Thr Ala Val Asp Ala Asn
65 70

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<212> PRT
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Peptide

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Ile Tyr Ala Ala Asn Val Ala Asn Leu Phe Ser Gly Glu Gly Ala Gln
20 25 30

Gln Val Ala Pro Ala Gln Glu Gly Ala Gln Gln Glu Gly Ala Gln Ala
35 40 45

Ala Pro Ala Pro Ala Ser Ala Pro Ala Gln Gly Gly Val Asn Ser Pro
50 55 60

Val Asn Val Thr Thr Ala Val Asp Ala Asn
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<210> 36
<211> 75
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 36
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1 5 10 15
Ile Tyr Ala Ala Asn Val Ala Asn Leu Phe Ala Gly Glu Gly Ala Gln
20 25 30
Ala Ala Gln Ala Ala Pro Val Gln Glu Gly Ala Gln Glu Glu Gly Ala
35 40 45
Gln Gln Pro Thr Pro Ala Thr Ala Pro Thr Gln Gly Gly Val Asn Ser
50 55 60
Pro Val Asn Val Thr Thr Thr Val Asp Ala Asn
65 70 75

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<212> PRT
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
Peptide

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Ile Tyr Ala Ala Asn Val Ala Asn Leu Phe Ser Gly Glu Gly Ala Gln
20 25 30
Ala Ala Gln Thr Ala Pro Val Gln Glu Gly Ala Gln Gln Glu Gly Ala
35 40 45
Gln Gln Pro Ala Pro Val Thr Ala Pro Ser Gln Gly Gly Val Asn Ser
50 55 60
Pro Val Asn Val Thr Thr Thr Val Asp Ala Asn
65 70 75

<210> 38
<211> 75
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<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 38

Leu Arg Val His Val Gly Ala Asn Gln Asp Glu Ala Ile Ala Val Asn
1 5 10 15

Ile Tyr Ala Ala Asn Val Ala Asn Leu Phe Ser Gly Glu Gly Ala Gln
20 25 30

Thr Ala Gln Ala Ala Pro Val Gln Glu Gly Val Gln Gln Glu Gly Ala
35 40 45

Gln Gln Pro Ala Pro Ala Thr Ala Pro Ser Gln Gly Gly Val Asn Ser
50 55 60

Pro Val Asn Val Thr Thr Thr Val Asp Ala Asn
65 70 75